

COVID-19 presenting as intractable hiccups: An apparently harmless yet misleading manifestation.

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COVID-19 presenting as intractable hiccups: An apparently harmless yet misleading manifestation.

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Abstract

In 2020, COVID-19 was officially declared a pandemic. The primary mode of transmission of this disease is through respiratory droplets. Furthermore, common symptoms among infected individuals include fever, cough, fatigue, and shortness of breath, although there have been a few reported cases with less common manifestations like dizziness and persistent hiccups. In this instance, we present a case of an 82-year-old male patient who primarily presented with intractable hiccups. Unfortunately, as his condition continued to decline, he ultimately passed away. This case emphasizes the importance of recognizing and considering atypical and uncommon presentations, as they may carry significant and even more catastrophic consequences.

Keywords: Hiccups, Covid -19 , coronavirus, persistent hiccups.

Introduction

The Coronavirus disease 2019 was proclaimed a pandemic in 2020 by the World Health Organization (WHO) (1). Most patients who contracted the virus presented with fever, cough, tiredness, and troubled breathing (2). Additionally, they could suffer and present with other uncommon manifestations such as headache, dizziness, and the newly discovered refractory hiccups, albeit rarely (3,4).

The nature of hiccups, while usually harmless, is not fully understood, and some cases may indicate a serious underlying condition if hiccups were intractable (5). A recent systematic review that was published in 2022

has revealed only 16 reported cases of persistent hiccups linked to COVID-19, with most patients seeing improvement after treatment (6).

Herein, we present a case of an 82-years old male, who was diagnosed with COVID-19 infection after presenting with intractable hiccups after which he suffered from catastrophic events.

Case presentation

An 82-years-old male, who is known to have Hypertension, Hyperlipidemia, Chronic Kidney disease (with baseline creatinine of 2.5), Status-Post coronary artery bypass graft (CABG), and Status-Post Coronary revascularization (with stent placement), presented to the emergency department complaining of refractory hiccups for 5 days. In addition, he is a smoker with 50 pack years and known to have Metoclopramide and Morphine Allergies.

He complained of refractory hiccups lasting for the past 5 days that started after his family members had an Upper respiratory infection. Furthermore, the hiccups were associated with dry cough and orthopnea without any other associated symptoms such as fever, chest pain or gastrointestinal symptoms . His home medications include atenolol, enalapril, aspirin, and Plavix.

On physical examination, the patient was not in distress and the examination was not significant except for bibasilar crackles. His vital signs were remarkable for the presence of fever (38.6 C) and borderline Hypotension (97/55mmHg), the Oxygen saturation was 96% on room air. After this, he started on IV fluids and Antipyretics .

The laboratory evaluation revealed a high BNP (544 pg/ml), and creatinine (2.55mg/dl), while other labs were within the normal range. The Urine analysis was unremarkable while the Chest X-ray revealed bilateral lower zone infiltrates, and Blood and urine cultures were sent. Nevertheless, the patient's blood pressure did not respond to fluids, and he was started on Noradrenaline infusion and IV antibiotics and was admitted to the intensive care unit (ICU).

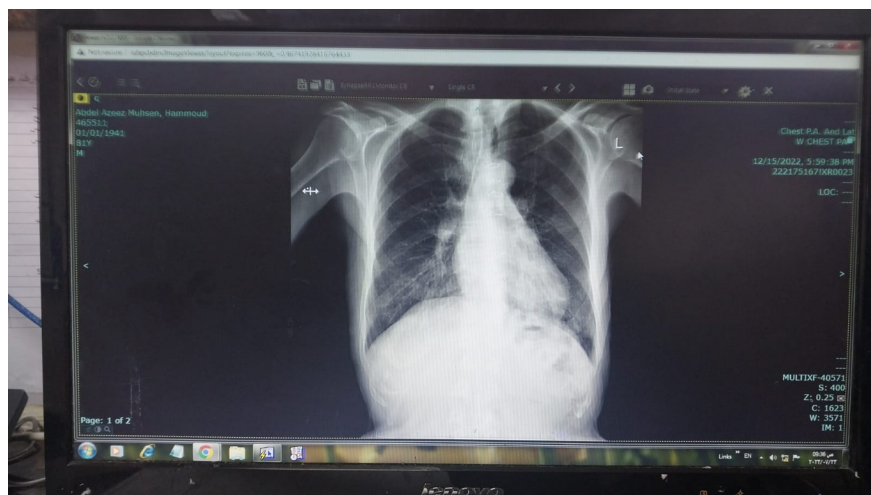
After admission, the patient developed tachycardia (heart rate was 150 without ECG changes) and oxygen saturation dropped to 89% and he started on oxygen therapy (nasal cannula 3L/minute). Furthermore, his SARS-COV-2 PCR was positive. It's worth mentioning that the patient did not receive vaccination against COVID-19.

Despite all the measures that were done and the COVID-19 management, his blood pressure was dropping Sharply once weaned off noradrenaline and his laboratory results kept worsening (Low hemoglobin, LDH: 563 units/L , D Dimer: 2.99 mg/L, C-reactive protein reached 230 mg/L then declined with IV antibiotics, and IL-6: 192) except for his creatinine which improved (1.5) and the cultures which were negative. Moreover, the patient developed Atrial fibrillation with Rapid Ventricular Response in the ICU which was controlled using rate control medication and was converted to therapeutic anticoagulation.

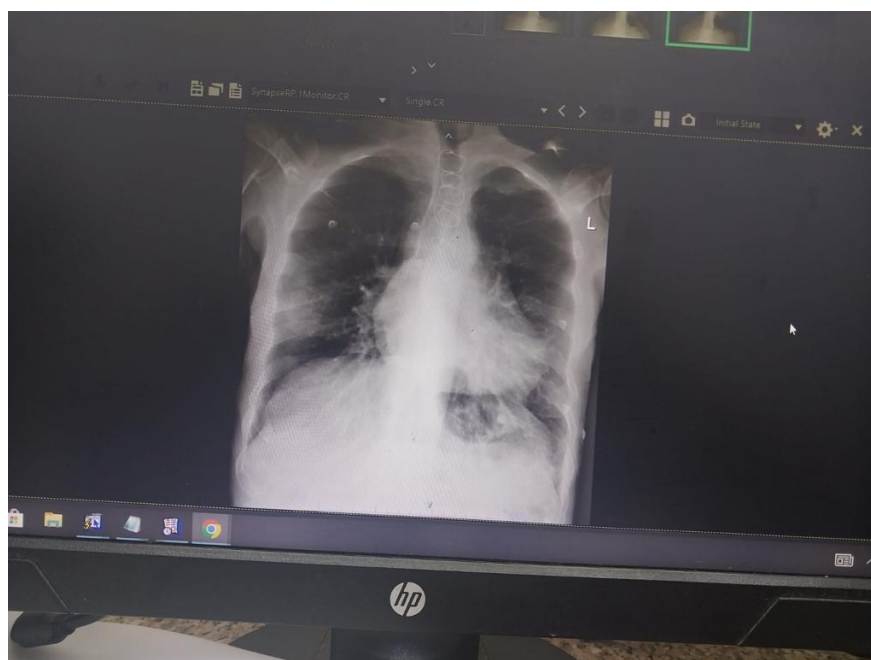
Surprisingly, His repeated Portable Chest X-ray revealed bilateral infiltrates that kept worsening despite treatment along with pulmonary vascular congestion, and he started to complain of atypical chest pain. The ECG was significant for the new onset of ST depression in leads V4-V6 along with Atrial fibrillation, the troponin was 114 and the BNP was 752, he was diagnosed with Non-ST-Elevation Myocardial infarction (NSTEMI) and he was started on therapy. Subsequently, bedside Echocardiography was done by the cardiologist and was remarkable for an ejection fraction of 45%, Bilateral Atrial enlargement, and minimal pericardial effusion.

Unfortunately, Sudden cardiac arrest with asystole ensued while in the ICU, and CPR was started but the rhythm was not reverted, and the patient was announced dead.

Radiography and patient's progress:



This is our patient's CXR upon presentation that shows bilateral lower zone infiltrate .



This is the CXR two days later with more obvious bilateral peripheral infiltrate characteristic of Covid-19 pneumonia.



Few days later, the patient's CXR deteriorated and continued to deteriorate until he passed away, unfortunately.

Discussion

In March 2020, the World Health Organization declared COVID-19 a global pandemic, leading to detrimental effects worldwide in regard to global health, economics, and societies which resulted in millions of deaths (7). This virus, known as severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), is transmitted through respiratory droplets primarily produced when coughing, sneezing, and speaking, with the respiratory and vascular systems being its main targets (7).

Patients with COVID-19 infection typically present with fever, cough, and difficulty breathing, but there have been reports of other, atypical and hidden, symptoms that present a challenge to diagnosis and have a negative impact on patients (8). These can include sneezing, hemoptysis, shivering, and persistent hiccups (8,9).

Hiccups occur when the diaphragm and intercostal muscles contract involuntarily. Although generally benign, sustained hiccups that last over two days may indicate an underlying sickness and require medical attention and should not be underestimated (9). The exact cause of hiccups remains unclear, yet some potential causes include the discriminatory nature in nerve cells (selectivity of neurotropism areas), irritation of the phrenic and vagus nerves due to pneumonia, and possibly arrhythmias (9-11).

Reports of people with COVID-19 who have long-lasting hiccups are very rare. A review from 2022 found only 16 similar cases (5). Moreover, in another systematic review that studied the COVID-19 patients' manifestations in the general population, hiccups were not reported among the reported clinical manifestations, which highlights the face of hiccups being a rare and overlooked presentation (8).

In a systematic review indicated that COVID-19 patients with persistent hiccups frequently had high C-reactive protein, D-Dimer, and LDH in their lab tests. This was comparable to our patient, and remarkably, most patients also had hypertension (5). Unfortunately, administering metoclopramide to control the hiccups was not possible because of the patient's allergy, despite showing positive effects in other patients (5).

For patients with refractory hiccups, a comprehensive evaluation should be conducted to check for other potential sources such as gastro esophageal reflux disease, central nervous system disorders, and chemical imbalances, among others (12). Furthermore, CT scans and MRIs should be considered in some cases to ensure that a stroke or MS is not present (12).

Given the current situation with the COVID-19 pandemic, it is essential to take into account SARS-CoV-2

infection in those affected, even if there are no common symptoms (13). A timely diagnosis of the virus is key to curbing spread and instantly beginning appropriate treatment. This case underscores just how essential it is to maintain a high level of vigilance for COVID-19, including if the only symptom is hiccups. It similarly reveals how an apparently minor symptom can be an indication of something large if it isn't identified and taken care of swiftly.

In addition, what makes this case unique, are the facts that the patients presented complaining of refractory hiccups solely without other symptoms, the incidental finding of borderline blood pressure and the bilateral lower zones infiltrates on chest X-ray at presentation. It's important also to mention that after reviewing the literature and the reported cases, it was found that the majority of patients improved after treatment and a minority did not (5). Nevertheless, this is the second case in which the patient, unfortunately, passed away despite all the efforts and measures that were taken (14).

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- Asma Salameh Albtoosh: Supervision; writing – review and editing
- Mohammed Aloqaily: Data curation; investigation; writing – original draft
- Nizar S. Alkhlaifat: Data curation; investigation; writing – original draft
- Ahmad Aldurgham: Data curation; investigation; writing – original draft
- Zeyad Fraij: Data curation; investigation; writing – original draft

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